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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/831,829	05/15/2001	Akihiro Horii		9525
31780	7590	08/09/2005		
ERIC ROBINSON PMB 955 21010 SOUTHBANK ST. POTOMAC FALLS, VA 20165			EXAMINER TSE, YOUNG TOI	
			ART UNIT 2637	PAPER NUMBER

DATE MAILED: 08/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/831,829

Applicant(s)

HORII ET AL.

Examiner

YOUNG T. TSE

Art Unit

2637

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 9-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 9-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 May 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 01142005.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement (IDS) submitted on January 14, 2005 has been considered by the examiner. However, the foreign patent JP-07-254861 has not been considered by the examiner because it has already listed in the IDS submitted on May 15, 2001.

Drawings

2. Figures 4-6 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: the reference signs of FIG. 2(A) to FIG. 2(C), FIG. 3(A) to FIG. 3(H), FIG. 6(A) to FIG. 6(G), and FIG. 7(A) to FIG. 7(D) mentioned in the specification are not shown. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in

reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The disclosure is objected to because of the following informalities: on page 1, line 15, "C/N" is undefined; on page 8, lines 10-23, the brief description of the drawings appears not correspond to all the drawings discussed in the specification. Appropriate correction is required.

Claim Objections

5. Claims 12 and 14 are objected to because of the following informalities: in claim 12, line 2, the word "further" should be deleted; in claim 14, lines 3 and 5, "a step" and "steps" should be "the step" and "the steps", respectively. Appropriate correction is required.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 9-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 9, line 6, the phrase "and/or" is indefinite because it is unclear both "before and after", or just "before or after". Also see claim 14.

In claim 13, it is unclear how is the accumulator related to the serial/parallel converter and the selector.

In claim 14, line 6, it is unclear what step is "a demodulation step"? lines 7-8, the phrase "selecting output data of said serial/parallel converting step and said pseudo-data outputted from said pseudo-data generating step" is vague and indefinite because the serial/parallel converting step and the pseudo-data generating step do not include output data and pseudo-data, respectively.

The dependent claims 10-12 are depended upon the independent claim 9.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

10. Claims 9-10 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over the prior art Figure 4 of the instant application in view of Hashimura.

The prior art Figure 4 of the instant application clearly includes a demodulator comprising pseudo-data inserting means for inserting pseudo-data for decoding a transmission and multiplexing configuration control (TMCC) signal before and/or after the TMCC signal, wherein the pseudo-data inserting means comprises a serial/parallel converter (7) for serial/parallel converting a demodulated base band signal from a demodulation circuit (1) and a selector (6) for selecting the output data of said serial/parallel converter and the demodulated data of the demodulation circuit (1).

However, the prior art Figure 4 fails to show or suggest a pseudo-data generator for generating pseudo-data and the selector for selecting the output data of said serial/parallel converter and the pseudo-data outputted from said pseudo-data generator as recited in the apparatus claim 9 and also the method claim 14.

Hashimura (U.S. Patent No. 6,147,826) also discloses a demodulation circuit in Figure 14 which comprises a serial/parallel converter (79) for serial/parallel converting a demodulated base band signal from a decoder (78), a pseudo random generator (294) for generating pseudo-data, and a selector (304) for selecting the output data of said serial/parallel converter (79) and the pseudo-data outputted from said pseudo random generator (294).

With respect to claim 10, the TMCC signal is Viterbi decoding by the Viterbi trellis decoder (4) as shown in the prior art Figure 4.

Therefore, it would have been obvious to one of ordinary skill in the art to replace an additional pseudo data generator in the prior art Figure 4 of the demodulator as taught by Hashimura in order for the selector to select the output data of said serial/parallel converter and the pseudo-data outputted from said pseudo random generator instead of selecting the output data of said serial/parallel converter and the demodulated data of the demodulation circuit to improve error correction and error rate after the Viterbi decoding.

Allowable Subject Matter

11. Claims 11 and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

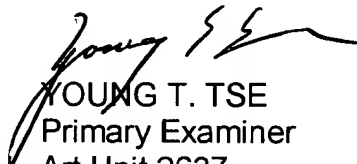
12. Claim 13 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

13. The following is a statement of reasons for the indication of allowable subject matter: the prior art fails to show or suggest that the pseudo-data includes related fixed data maintaining a convoluted time sequential relationship, or fixed data and a synchronization word for frame identification, or an accumulator is connected between the serial/parallel converter and the selector, wherein the output data of said serial/parallel converter is at a half of a transmission rate of a received signal the out of the selector is at the same transmission rate as the received signal.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YOUNG T. TSE whose telephone number is (571) 272-3051. The examiner can normally be reached on Monday-Thursday and alternative Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jay Patel can be reached on (571) 272-2988. The Central FAX Number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



YOUNG T. TSE
Primary Examiner
Art Unit 2637